

## ABSTRACT

### THE EFFECT OF GIVING CIRCULAR LEAF (*Annona muricata* Linn) ETHANOL EXTRACT ON THE HISTOPATOLOGICAL DESCRIPTION OF WHITE RAT GASTER (*Rattus norvegicus*) MALE *Sprague dawley* STAIN INDUCED BY METHANIL YELLOW

By

ARDILA PUTRI MAHARANI

**Background** : Methanil yellow can cause tissue damage through oxidative stress mechanism. Soursop leaves contain flavonoids which have antioxidant effects to prevent gastric mucosal damage. This study aimed to determine the effect of giving circular leaf (*Annona muricata* Linn) ethanol extract on the histopathological description of white rat gaster (*Rattus norvegicus*) male *sprague dawley* stain induced by methanil yellow.

**Methods** : This study is a Post test Control Group Design pattern using 25 rats which were divided into 5 groups with treatment for 30 days. Group K- was given 2 ml of distilled water. The K+ group was given methanyl yellow 3000 mg/kgBW/day. Group P1 was given methanil yellow 3000 mg/kgBW/day and ethanol extract of soursop leaves 100 mg/kgBW/day. Group P2 was given methanil yellow 3000 mg/kgBW/day and ethanol extract of soursop leaves 200 mg/kgBW/day. Group P3 was given methanil yellow 3000 mg/kgBW/day and ethanol extract of soursop leaves 400 mg/kgBW/day. Observations were made using a microscope by looking at the degree of gastric damage.

**Results** : The results of the average degree of gastric damage of rats at K- =  $0.44 \pm 0.18$  m; K+ =  $1.8 \pm 2.5$  m; P1 =  $1.36 \pm 0.20$  m; P2 =  $1.08 \pm 0.18$  m; and P3 =  $0.76 \pm 0.26$  m. This study used the One Way ANOVA parametric test ( $p < 0.05$ ) and continued with the Post Hoc LSD test ( $p < 0.05$ ). There were significant differences in all groups.

**Conclusions** : There was an improvement in the administration of ethanolic extract of soursop (*Annona muricata* Linn) leaves to the gastric histopathological picture of male white rat (*Rattus norvegicus*) *sprague dawley* strain due to administration of methanyl yellow.

**Keywords** : Circular leaf, Gaster, Methanil Yellow

## ABSTRAK

### **PENGARUH PEMBERIAN EKSTRAK ETANOL DAUN SIRSAK (*Annona muricata* Linn) TERHADAP GAMBARAN HISTOPATOLOGI GASTER TIKUS PUTIH (*Rattus norvegicus*) JANTAN GALUR *Sprague dawley* YANG DIINDUKSI METANIL YELLOW**

Oleh

**ARDILA PUTRI MAHARANI**

**Latar Belakang :** *Metanil yellow* dapat menyebabkan kerusakan jaringan melalui mekanisme stress oksidatif. Daun sirsak memiliki kandungan flavonoid yang memiliki efek antioksidan untuk mencegah kerusakan mukosa lambung. Penelitian ini bertujuan untuk mengetahui adanya pengaruh pemberian ekstrak etanol daun sirsak (*Annona muricata* Linn) terhadap gambaran histopatologi gaster tikus putih (*Rattus norvegicus*) jantan galur *sprague dawley* yang diinduksi *metanil yellow*.

**Metode :** Penelitian ini merupakan pola *Post test Control Group Design* menggunakan 25 ekor tikus yang dibagi menjadi 5 kelompok dengan perlakuan selama 30 hari. Kelompok K- diberi aquades 2 ml. Kelompok K+ diberi *metanil yellow* 3000 mg/kgBB/hari. Kelompok P1 diberi *metanil yellow* 3000 mg/kgBB/hari dan ekstrak etanol daun sirsak 100 mg/kgBB/hari. Kelompok P2 diberi *metanil yellow* 3000 mg/kgBB/hari dan ekstrak etanol daun sirsak 200 mg/kgBB/hari. Kelompok P3 diberi *metanil yellow* 3000 mg/kgBB/hari dan ekstrak etanol daun sirsak 400 mg/kgBB/hari. Pengamatan dilakukan menggunakan mikroskop dengan melihat derajat kerusakan gaster.

**Hasil :** Hasil rerata derajat kerusakan gaster tikus pada K- =  $0,44 \pm 0,18 \mu\text{m}$ ; K+ =  $1,8 \pm 2,5 \mu\text{m}$ ; P1 =  $1,36 \pm 0,20 \mu\text{m}$ ; P2 =  $1,08 \pm 0,18 \mu\text{m}$ ; dan P3 =  $0,76 \pm 0,26 \mu\text{m}$ . Penelitian ini menggunakan uji parametrik *One Way ANOVA* ( $p < 0,05$ ) dan dilanjutkan uji *Post Hoc LSD* ( $p < 0,05$ ) didapatkan perbedaan yang bermakna pada semua kelompok.

**Kesimpulan :** Terdapat perbaikan pemberian ekstrak etanol daun sirsak (*Annona muricata* Linn) terhadap gambaran histopatologi gaster tikus putih (*Rattus norvegicus*) jantan galur *sprague dawley* akibat pemberian *metanil yellow*.

**Kata Kunci :** Gaster, *Metanil Yellow*, Daun Sirsak